ing 1.59 cm. in diameter was lowered until it exerted a load of 0.3 g. on the sample, as determined by the weight reading of the balance. The foot was then lowered a distance of 0.23 mm and the weight reading on the balance was recorded as the load required to compress the gel sample. These readings appear in Table 2.

Penetration Resistance Test

The gel samples for this test were prepared by placing 54 g. of a curable composition in a 60 cc capacity cylindrical container and curing the sample as described in the foregoing section of this example. The test was performed using a laboratory model penetrometer manufactured by Precision Scientific Corporation and equipped with a 1.2 cm.-diameter cylindrical foot. The height of the foot was adjusted such that it rested on the surface of the sample without placing any detectable load on the surface of the sample. Weights were then placed on top of the foot in 50 or 100 g. increments until the foot penetrated the surface of the sample. The total amount of weight present when penetration occurred is recorded in Table 2 together with the highest weight at which no penetration was observed.

TABLE 2

Sample Number	Compressibility (g/0.23 mm compression)	Penetration Resistance (g. prior to and following penetration)
Invention		
1	14.67	300–350
2	32.40	750–800
3	49.00	1300–1350
4	24.60	700–750
5	34.00	1150–1200
6	15.50	400–450
7	14.50	400–450
8	18.16	400–450
Comparative Samples*		
9	248.00	1550
11	120.00	1550
15	4.46	100–200

*Refer to ** in Table 1

Samples 9 and 11 were above the limits for compressibility and penetration resistance defined hereinbefore for preferred embodiments the present invention. Sample 15 was considerably softer than cured gels prepared using the compositions of this invention. Samples 9, 11 and 15 are all within the broadest scope of this invention.

The data in Tables 1 and 2 demonstrate the wide variation in compressibility and penetration resistance that can be obtained using compositions within the scope of the present invention by varying the molar ratio of silicon-bonded hydrogen atoms to vinyl radicals and/or the relative concentration of resinous copolymer (B). Samples 1, 6, 7 and 8 represent particularly preferred embodiments of this invention, and would be suitable for the fabrication of pressure sensitive optical waveguide devices described hereinbefore.

EXAMPLE 2

This example demonstrates the resiliency exhibited by a preferred cured composition of this invention. The composition identified as number 8 in the preceeding Example 1 was cured in a circular aluminum weighing dish to form a sample measuring 6.4 cm. in diameter and about 1.6 cm. in thickness. The cured sample was covered with a circular piece of 0.4 mm.-thick film of a polyurethane that was approximately equal in diameter to that of the sample.

The covered sample was placed on a substantially horizontal surface directly below a load cell that was attached to the movable beam of a Scott model CRE-500 laboratory tester. The load cell was equipped with a vertically oriented 0.16 cm.-diameter spherical foot. The electrical output of the load cell was connected to an X-Y recorder that plotted the loading on the cell as a function of distance traveled by the movable beam.

To ensure that the foot was contacting the test sample, the movable beam of the tester was lowered until the recorder indicated a loading of 5 grams on the cell. This value is referred to herein as h_1. The movable beam was then lowered at a rate of 25 cm. per minute to a height of h_2, at which the recorder indicated a loading of 25 grams. The beam was then raised to the initial h_1 value at a rate of 50 cm. per minute. The rate at which the loading on the load cell returned to the initial 5 g. value indicated that the sample recovered from 95 to 100% of the height lost during compression, equal to h_1-h_2, within two seconds following removal of the compressive force exerted by the foot.

The foregoing resiliency test was repeated three times to ensure reproducibility.

That which is claimed is:

1. A curable liquid polyorganosiloxane composition consisting essentially of the product obtained by mixing (A) 100 parts by weight of at least one liquid triorganosiloxy endblocked polydimethylsiloxane, said triorganosiloxy radicals being selected from dimethylvinylsiloxy and methylphenylvinylsiloxy, where said polydimethylsiloxane exhibits a viscosity of from 1.0 to 500 Pa·s at 25° C.; (B) from 5 to 25 parts of a benzene-soluble copolymer consisting essentially of units of the formulae $CH_2{=}CH(CH_3)_2SiO_{\frac{1}{2}}$, $(CH_3)_3SiO_{\frac{1}{2}}$ and $SiO_{4/2}$, where the molar ratio of the combination of $CH_2{=}CH(CH_3)_2SiO_{\frac{1}{2}}$ and $(CH_3)_3SiO_{\frac{1}{2}}$ units to $SiO_{4/2}$ units is from 0.7:1 to 1.2:1, inclusive, and $CH_2{=}CH(CH_3)_2SiO_2$ units constitute from 2 to 8 percent by weight of said copolymer; (C) an organosiloxane of the formula $H(CH_3)_2SiO[Si(CH_3)_2O]_x$-$Si(CH_3)_2H$, where x is an integer from 0 to 50, in an amount sufficient to provide at least 1.6 silicon-bonded hydrogen atoms per vinyl radical present in said composition; (D) a polyorganosiloxane containing at least three silicon-bonded hydrogen atoms per molecule in an amount sufficient to provide from 5 to 15 percent of the silicon-bonded hydrogen atoms present in (C) and (D), with the proviso that the total number of silicon-bonded hydrogen atoms present in (C) and (D) is from 1.8 to 2.9 times the number of vinyl radicals present in said composition; and (E) an amount of platinum catalyst sufficient to promote curing of said composition.

2. A composition according to claim 1 wherein said composition contains from 1.90 to 2.80 silicon-bonded hydrogen atoms per vinyl radical and, when cured, is transparent and exhibits the following physical properties:

a compressibility of 2.2 mm. under a load of from 14 to 50 g. applied by a 1.6 cm. diameter spherical foot; and

a resistance to penetration under a load of at least 400 g. applied by a 1.2 cm. diameter cylindrical foot.

3. A composition according to claim 1 where the average value of x in (C) is from 10 to 15.